IN THE CLAIMS:

Please cancel claims 1-146, without prejudice and substitute therefore:

- 147. (New) Crystalline atorvastatin hemi-calcium and solvates thereof characterized by a physical or spectroscopic analysis result selected from the group consisting of:
 - a) a powder X-ray diffraction pattern generated using CuK_{α} radiation with peaks at 4.8, 5.2, 8.0, 9.2, 9.6, 19.0, 20.0, 24.0 and 29.0±0.2 degrees two-theta;
 - a powder X-ray diffraction pattern generated using CuK_α radiation with peaks
 at 9.3, 9.6, 19.2, 20.0, 21.6, 22.4 and 23.9±0.2 degrees two-theta;
 - d-spacings of about 30.81, 18.46, 16.96, 15.39, 14.90, 12.78, 11.05, 9.58, 9.22, 7.42, 6.15, 5.43, 4.62, 4.44, and 3.98Å;
 - d) a monoclinic unit cell with cell parameters: a=18.55-18.7 Å, b=5.52-5.53 Å, c=31.0-31.2 Å and β =97.5-99.5
 - e) a solid state cross-polarization/magic angle spinning ¹³C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million; and
 - f) a solid state cross-polarization/magic angle spinning ¹³C nuclear magnetic resonance spectrum wherein the chemical shift differences between the lowest resonance and other resonances are: 2.2, 7.0, 7.4, 8.3, 22.5, 23.0, 23.7, 25.6, 26.3, 28.3, 53.0, 55.5, 96.3, 98.2, 101.7, 102.3, 104.0, 105.0, 108.8, 111.0, 111.4, 116.4, 117.3, 119.2, 120.5, 122.0, 142.0, 148.6, 161.0 and 168.7 parts per million.

- 148. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the powder X-ray diffraction pattern with peaks at 4.8, 5.2, 8.0, 9.2, 9.6, 19.0, 20.0, 24.0 and 29.0±0.2 degrees two-theta.
- 149. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 148 wherein the powder X-ray diffraction pattern has peaks at 11.9, 17.3, 21.5 and 22.3±0.2 degrees two-theta.
- 150. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 149 characterized by a powder X-ray diffraction pattern generated using CuK_{α} radiation substantially as depicted in FIG 3.
- 151. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the powder X-ray diffraction pattern with peaks at 9.3, 9.6, 19.2, 20.0, 21.6, 22.4 and 23.9±0.2 degrees two-theta.
- 152. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 148 characterized by a powder X-ray diffraction pattern generated using CuK_{α} radiation substantially as depicted in FIG 3.
- 153. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 151 wherein the powder X-ray diffraction pattern further has a peak at 16.3 degrees two-theta.

- 154. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 151 wherein the powder X-ray diffraction pattern further includes peaks at 17.1 (broad), 24.7, 25.6, 26.5±0.2 degrees two-theta.
- 155. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the *d*-spacings and the crystalline atorvastatin hemi-calcium and solvates thereof is further characterized by a high resolution powder X-ray diffraction pattern substantially as shown in FIG 4 when irradiated with X-rays with a wavelength of about 1.15Å.
- 156. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is a solid state cross-polarization/magic angle spinning ¹³C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million and the spectrum further includes resonances at 17.8, 20.0, 40.3, 40.8, 41.5, 43.4, 44.1, 46.1, 70.8, 73.3, 114.1, 116.0, 159.8, 166.4, 178.8 and 186.5±0.1 parts per million.
- 157. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is a solid state cross-polarization/magic angle spinning ¹³C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million and the spectrum is substantially as depicted in FIG 5.

- 158. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 having a water content of up to 7%.
- 159. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 that is a trihydrate.
- 160. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 containing up to about four moles of water.
- 161. The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 containing up to about 3% ethanol.
- 162. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 having a narrow particle size distribution.
- 163. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 162 wherein all of the particles are 100 microns or less in diameter.
- 164. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 163 wherein all of the particles are 50 microns or less in diameter.
- 165. Crystalline atorvastatin hemi-calcium Form VIII ethanolate.

- 166. The crystalline atorvastatin hemi-calcium ethanolate of claim 165 containing up to about 3 % ethanol.
- 167. (New) A process for preparing the crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 comprising the steps of:
 - a) suspending any other crystalline or amorphous form of atorvastatin hemicalcium in a diluent selected from the group consisting of lower alcohols and mixtures of lower alcohols and water for a period of time sufficient to cause substantial conversion to the crystalline atorvastatin hemi-calcium of claim 147 or solvate thereof, and
 - b) separating the diluent.
- 168. (New) The process of claim 167 wherein the temperature of the suspension is elevated.
- 169. (New) The process of claim 167 wherein the diluent is ethanol or a mixture of ethanol and water.
- 170. (New) The process of claim 169 wherein the diluent is ethanol or a mixture of ethanol and less than about 0.5% water.
- 171. (New) The process of claim 170 wherein the diluent is ethanol or a mixture of ethanol and less than about 0.2% water.

- 172. (New) The process of claim 169 further comprising adding methanol to the suspension.
- 173. (New) The process of claim 169 wherein the other crystalline or amorphous form of atorvastatin hemi-calcium is selected from the group consisting of Forms I, V and XII.
- 174. (New) The process of claim 169 wherein the diluent is a mixture of ethanol and water.
- 175. (New) The process of claim 174 wherein the mixture is a mixture of at least about 19 volumes of ethanol to about 1 volume of water.
- 176. (New) The process of claim 175 wherein the other crystalline or amorphous form of atorvastatin hemi-calcium is Form V.
- 177. (New) The process of claim 174 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.1% contamination by desfluoroatorvastatin hemi-calcium.
- 178. (New) The process of claim 177 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.07% contamination by desfluoroatorvastatin hemi-calcium.
- 179. (New) The process of claim 174 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 1% contamination with *trans* atorvastatin hemi-calcium.

- 180. (New) The process of claim 179 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.6% contamination with *trans* atorvastatin hemi-calcium.
- 181. (New) The process of claim 174 wherein the mixture is a mixture of ethanol and water in a volume ratio of about 5:1.
- 182. (New) The process of claim 167 wherein the diluent is selected from the group consisting of 1-butanol and mixtures of 1-butanol and water.
- 183. (New) The process of claim 182 wherein the diluent is a 1:4 1-butanol:water mixture.
- 184. The process of claim 167 further comprising the preliminary step of converting atorvastatin into the atorvastatin hemi-calcium by contacting the atorvastatin with a source of calcium ion.
- 185. (New) A pharmaceutical composition comprising the crystalline atorvastatin hemicalcium and solvates thereof of claim 147 and at least one pharmaceutical excipient.
- 186. (New) A pharmaceutical dosage form comprising the crystalline atorvastatin hemicalcium and solvates thereof of claim 147 and at least one pharmaceutical excipient.

- 187. (New) Use of the crystalline atorvastatin hemi-calcium and solvates thereof of claim

 147 to prepare a pharmaceutical composition or dosage form.
- 188. (New) A method of reducing low density lipoprotein particle concentration in the blood stream of a patient by administering the crystalline atorvastatin hemi-calcium or solvate thereof of claim 147.